

<b>Interview Summary</b>	Application No. 09/993,531	Applicant(s) TODD, KEVIN B.	
	Examiner Bradley J Van Pelt	Art Unit 3682	

All participants (applicant, applicant's representative, PTO personnel):

(1) Bradley J Van Pelt.

(3) Kevin B. Todd.

(2) David Bucci.

(4) Timothy E. Levstik (5) Philip T. Petti.

Date of Interview: 16 March 2005.

Type: a) ☐ Telephonic b) ☐ Video Conference  
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.

If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: all.

Identification of prior art discussed: See attached.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See attached summary.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
 Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

**INTERVIEW SUMMARY**

**Application No.**      **Applicant(s)**  
09/993,531              Todd, Kevin  
**Examiner:** Van Pelt   **Art Unit** 3682

**All Participant:**

- (1) Examiner Brad Van Pelt
- (2) Supervisory Examiner David Bucci
- (3) Kevin B. Todd
- (4) Timothy E. Levstik
- (5) Philip T. Petti

**Status of Application: Non-final**

Applicant filed amendment 2/9/05

**Date of Interview:** 16 March 05 – 1 pm

**Type of Interview:** Personal, no exhibits shown or demonstrated. Agreement not reached.

**Part I.**

**Rejection(s) discussed:** 102(b) and 103

**Claims discussed:** all, in the response of 2/9/05

**Prior art documents discussed:** US Pat. No. 4,526,558 to Durham; US Pat. No. 6,155,943 to Ledvina et al.; Japanese Publication HEI 4-165148; Japanese Publication HEI 1-95538; Offenlegungsschrift DE 195 20 508. Translations of the Japanese publications and the German patent were faxed to Examiner Van Pelt on March 14, 2005 prior to the interview. Also prior to the interview on March 14, applicant advised the Examiner of U.S. Publication No. US2003/0104886, published June 5, 2003.

**Part II.**

SUBSTANCE OF THE INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT

## WAS DISCUSSED:

Applicant asserted that Ledvina described a noise reduction random sprocket that does not inherently decrease the force on a chain, but rather can increase it. Applicant indicated that Durham merely described a bicycle chain and sprocket where the sprocket was designed to readily move the chain from one sprocket to another. It would not inherently reduce tension on the chain. Applicant stated that these references are further explained in the response filed. February 9, 2005.

The translations of the foreign references were discussed and compared to the applicant's invention. Applicant stated that his invention was concerned with reducing the chain tensions in a chain and sprocket system where the sprocket pattern of root radii and/or chain pitch radii (when the chain is engaged on the sprocket) permitted the tension on the chain (  $\leftarrow \rightarrow$  ) to be reduced. Applicant asserted that the three foreign references (Japanese Publication HEI 4-165148; Japanese Publication HEI 1-95538; Offenlegungsschrift DE 195 20 508) did not suggest applicant's structure or solution to reducing the chain tensions where the forces exerted on the chain were the result of activities external to the chain. Applicant noted that Figure 7 in his application showed this tension reduction to be especially effective for chains operating at variable speeds where the system would reach a resonance condition. Applicant further noted that Figure 7 showed how his invention reduced maximum tensions on a chain relative to a straight sprocket. Applicant also noted Figure 7 showed that significantly greater tensions on the chain were created with a random noise reduction sprocket.

Japanese Publication HEI 4-165148

Applicant noted that the JP 148 publication described a speed control device and did not describe a tension reduction on the chain through the use of a sprocket design and pattern. Applicant noted that in connection with the reference's Figure 7 and the reference's description of the prior art (at page 3 of the translation) cam pulley 3 is described as having an "eccentricity measuring  $\Delta r$ , the tightener 5 will shift outwards by that distance, and the rotational velocity of the cam pulley will increase by  $\Delta v$ ." With respect to the purported invention described in JP 148, the reference also describes intermediate pulley 6 in Figure 1 (at page 5) as "eccentric", but

does not indicate it is eccentric by virtue of a sprocket design as opposed to a shifting shaft as seen in Figure 7 of that reference. This reference describes a speed control and not a force minimization on the chain.

Japanese Publication HEI 1-95538

Applicant explained that JP 538 described a “tension equalizing device” (see page 2, first sentence of first full paragraph) intended to eliminate tension fluctuations, but which would likely increase the overall chain tensions. While Figures 1A and B illustrate an oval sprocket the sprocket design was to equalize varying forces due to engine rotation which periodically fluctuates. The idea possibly is to reduce slack and fatigue on the chain which would increase force on the chain not reduce it. The reference does not suggest that its sprocket was used, or could be used, to reduce the overall chain tensions in the system.

Offenlegungsschrift DE 195 20 508

Offen 505 describes controlling vibrations with an “out of round” driving wheel – “The problem of the invention is to counteract the torsional vibrations appearing in timing drives of this class by simple means, more particularly to eliminate audible vibration noise.” See page 2, lines 14-15. The reference then describes “detuning” the timing drive of an engine by shifting or displacing the resonance speed of the timing drive–“Contrary to known measures, which aim to destroy the vibration energy, a detuning of the timing drive with an additional nonuniformity is proposed, by means of which the critical resonance or speed range is displaced into a non-interfering or non-occurring range.” See page 2, lines 18-20.

The reference describes using its “out of round” driving wheel to “thus bring about a displacement of the resonance.” Page 2, lines 24-25. Applicant asserts that to impose the significant changes in the system required to displace the resonance speed, the Offen 505 wheel must substantially increase chain tensions (e.g. to significantly increase the chain stiffness). The Offen 505 reference does not disclose or suggest applicant’s invention which reduces chain tensions.

The Claims

Applicant noted that the pending amendment had several claims of which claims 1, 10, 20, 27, 29, 33, 40 and 45 are independent claims. Applicant noted that almost all of these claims spoke to sprocket designs with root radii and/or pitch radii which are distributed to reduce the maximum tensions on the chain. Applicant also noted that independent claims 20 and 40 spoke to systems which operate at variable speeds where maximum tensions at resonance would be reduced relative to a straight sprocket. Applicant urged that the prior art did not suggest the problem or the solution solved by his invention.

**PART III.**

Applicant and the examiner agreed that due to the nature of the interview, applicant would submit an interview summary to the examiner. This would help the examiner recall the details of the interview in view of the fact that detailed examination of the pending amendment may be some weeks away.

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Examiner's Signature

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Applicant/Applicant's  
Representative—if appropriate